

# Wyoming's Smoke Management Program Annual Evaluation 2015

Hosted by: Wyoming Department of Environmental Quality  
Air Quality Division

February 17, 2015 from 10:00 a.m.-12:00 p.m.

Wind River Conference Room

Herschler Building 2E

Cheyenne, WY 82002

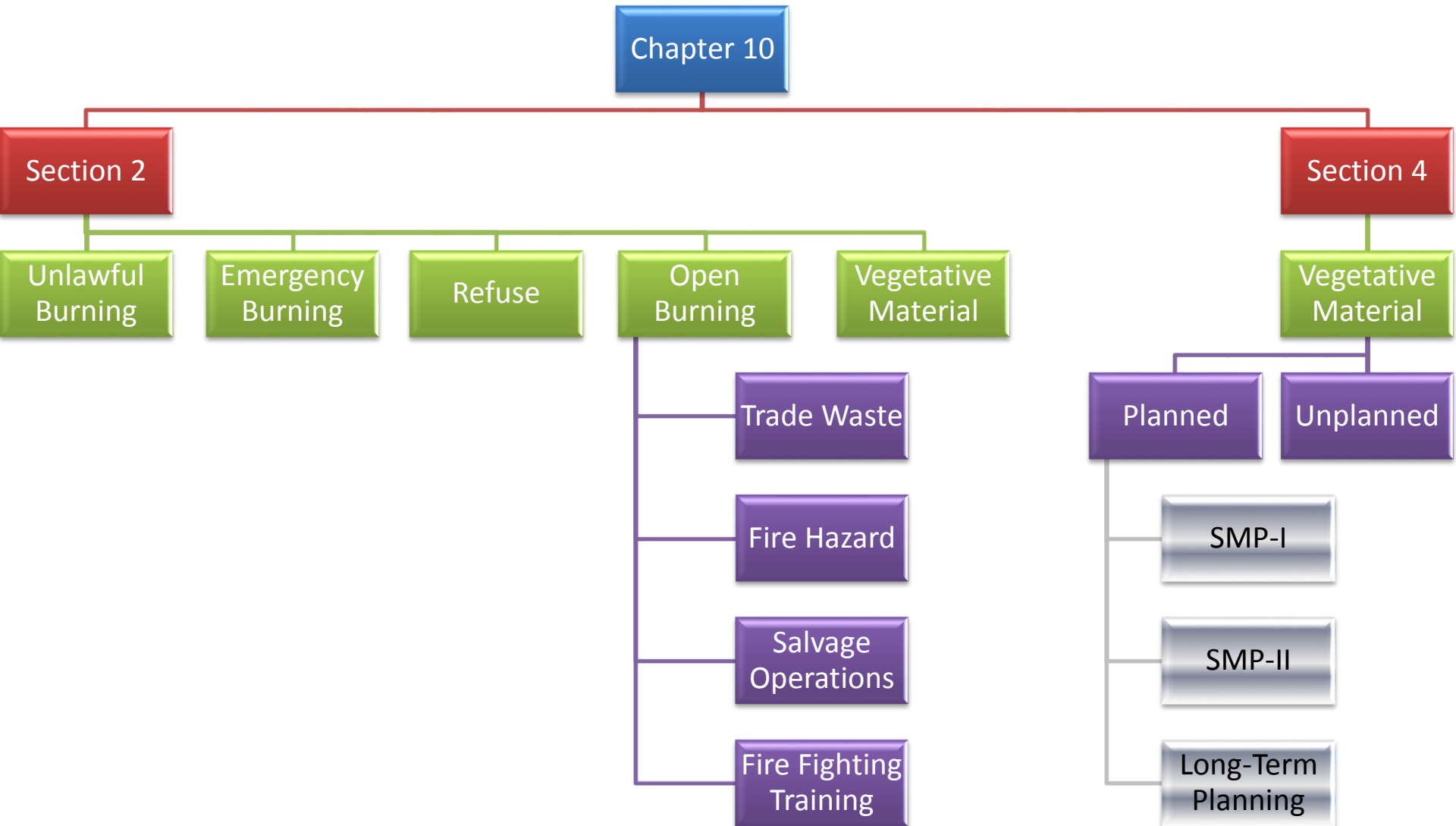
# SMP Contact Information

- Please send all smoke management correspondence to:
  - [smoke.management@wyo.gov](mailto:smoke.management@wyo.gov)
- Primary Contact:
  - Joe Smith
  - (307)777-6126
  - [joe.smith@wyo.gov](mailto:joe.smith@wyo.gov)
- Secondary Contact:
  - Brian Bohlmann, P.E., EI & RH Supervisor
  - (307)777-6993
  - [brian.bohlmann@wyo.gov](mailto:brian.bohlmann@wyo.gov)
- Emergency Contact:
  - Darla Potter, AQRM Program Manager
  - (307)777-7380
  - [darla.potter@wyo.gov](mailto:darla.potter@wyo.gov)

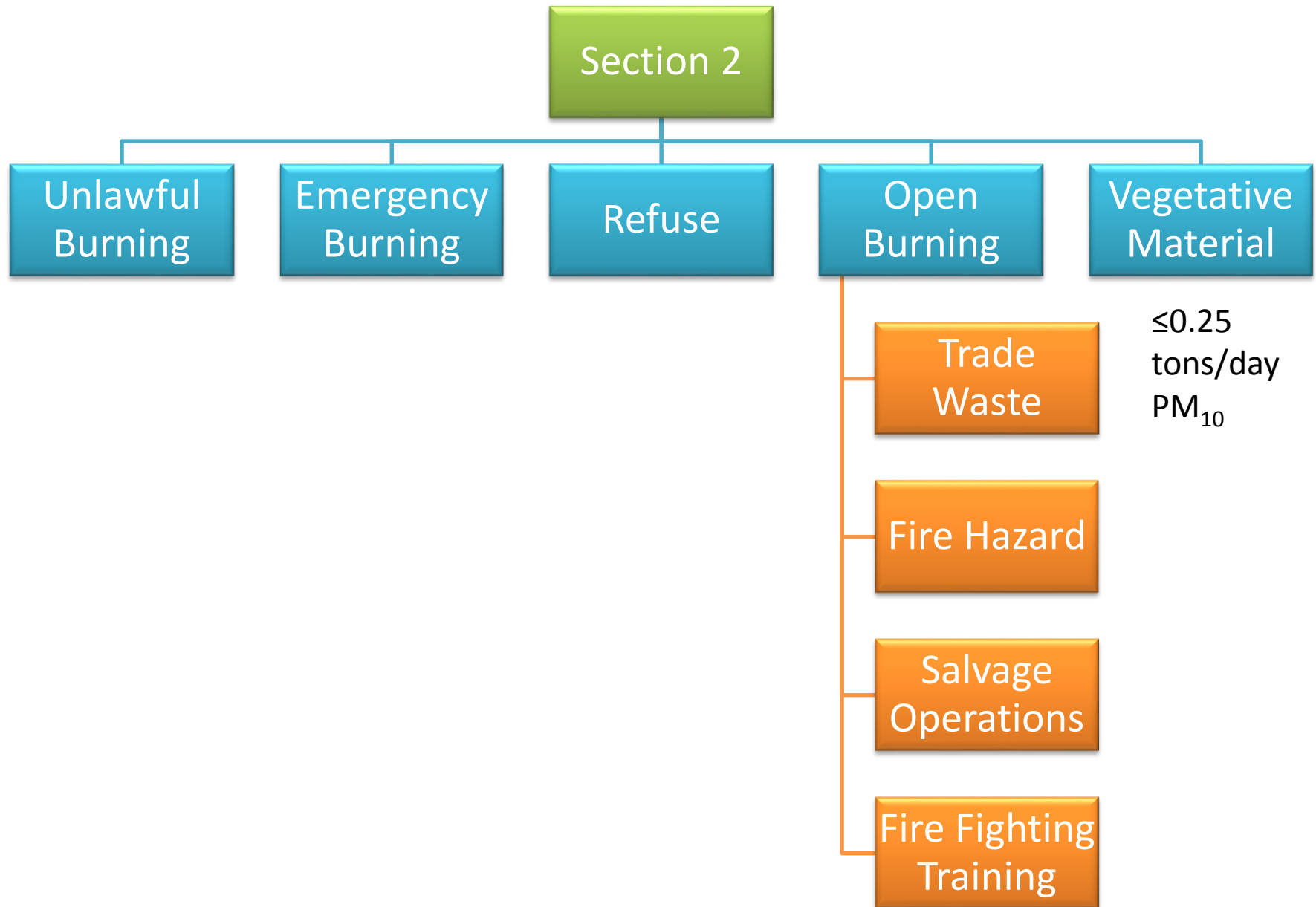
# Outline

- WAQSR Ch. 10 Regulations
  - Open Burning under Ch. 10, Section 2
  - Prescribed Burning (SMP-I, II) under Ch. 10, Section 4
  - Unplanned Events under Ch. 10, Section 4
  - Long Term Planning under Ch. 10, Section 4
- Burn statistics from 2012, 2013 and 2014
- Emissions from fires in 2012 and 2013
- UGRB Ozone Non-Attainment Area
- Discussion Topics
- Important websites

# WAQSR Ch. 10 Structure



# WAQSR Ch. 10, Section 2



# Vegetative Material

- *“Vegetative material” means untreated or unprocessed wood, including, but not limited to, trees, tree stumps, tree limbs, bark, chips, duff, grass, grass clippings, leaves, conifer needles, bushes, shrubs, weeds, clippings from bushes and shrubs, and agricultural plant residue.*

# Trade Wastes

*“Trade wastes shall mean solid, liquid, or gaseous material resulting from construction or the prosecution or any business, trade or industry, or any demolition operation including but not limited to wood, plastics, cartons, grease, oil, chemicals and cinders and excluding vegetative material and refuse.”*

# Prohibited Materials

*“Prohibited materials” means substances including, but not limited to; natural or synthetic rubber products, including tires; waste petroleum products, such as oil or used oil filters; insulated wire; plastic products, including polyvinyl chloride (“PVC”) pipe, tubing and connectors; tar, asphalt, asphalt shingles, or tar paper; railroad ties; wood, wood waste, or lumber that is painted or chemically treated; explosives or ammunition; batteries; hazardous waste products; asbestos or asbestos containing materials; or materials which cause dense smoke discharges, excluding refuse and flaring associated with oil and gas well testing, completions and well workovers.”*

# Unlawful Burning

*“No person shall burn prohibited materials using an open burning method, except as may be authorized by permit.”*

# Emergency Burning

*“For purposes of eliminating a potential or an imminent danger to public health, safety, or the environment, the Administrator of the Division may, on a case-by-case basis, waive any and all requirements of this Section.”*

# Refuse Burning

*“No person shall dispose of refuse by open burning, or cause, suffer, allow or permit open burning of refuse, except open burning of refuse associated with dwelling units, farmsteads, or ranch headquarters generated on those same premises, when all of the following requirements are met.”*

- Refuse Burning Restrictions
  - Nearest population is at least 500 feet away from the refuse burn.
  - The refuse burn is conducted during the daytime hours.
  - The person conducting the open burn shall attend and observe the refuse burn periodically to determine the dispersion, direction, and impacts of the smoke.

# Open Burning

***“No person or organization shall conduct or cause or permit open burning for the disposal of trade wastes, for a salvage operation, for the destruction of fire hazards if so designated by a jurisdictional fire authority, or for fire fighter training, except when it can be shown by a person or organization that such open burning is absolutely necessary and in the public interest. Any person or organization intending to engage in such open burning shall file a request to do so with the Division, on a form provided by the Division. Upon approval of the request by the Division, the person or organization may proceed with the open burn, when all of the following requirements are met.”***

# Open Burning Requirements

- Remove all prohibited materials unless the permit allows for it.
- Notify the Division prior to the ignition of the open burn, in accordance with the notification process approved by the Administrator of the Division.
- Prior to ignition, notify the jurisdictional fire authority(ies) responsible for the geographic area of the open burn.
- Attend and observe the open burn periodically to determine smoke dispersion and impacts.

# Open Burn Form

STATE OF WYOMING  
DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION

Open Burn Request Form  
Fire Fighting Training, Fire Hazard, Trade Waste, Salvage Operation

CONTACT INFORMATION

NAME \_\_\_\_\_ PHONE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ FAX \_\_\_\_\_  
CITY \_\_\_\_\_ E-MAIL \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
AGENCY/COMPANY (IF APPLICABLE) \_\_\_\_\_

BURN INFORMATION

LOCATION: COUNTY \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
LEGAL: SECTION \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ RANGE \_\_\_\_\_  
NEAREST POPULATION \_\_\_\_\_  
BURN SCHEDULE \_\_\_\_\_  
COMPOSITION & QUANTITY OF MATERIAL \_\_\_\_\_  
\_\_\_\_\_

BURN TYPE: FIRE FIGHTING TRAINING ☐ FIRE HAZARD\* ☐ TRADE WASTE ☐ SALVAGE OPERATION ☐

\* SPECIFY DESIGNATING JURISDICTIONAL FIRE AUTHORITY \_\_\_\_\_

IF PROHIBITED MATERIALS HAVE NOT BEEN REMOVED, STATE THE REASON WHY AS WELL AS WHY THEY SHOULD BE ALLOWED TO BE BURNED. \_\_\_\_\_

TO SHOW THAT OPEN BURNING IS NECESSARY AND IN THE PUBLIC INTEREST, STATE THE REASON(S) WHY NO DISPOSAL METHOD OTHER THAN OPEN BURNING CAN BE USED. \_\_\_\_\_

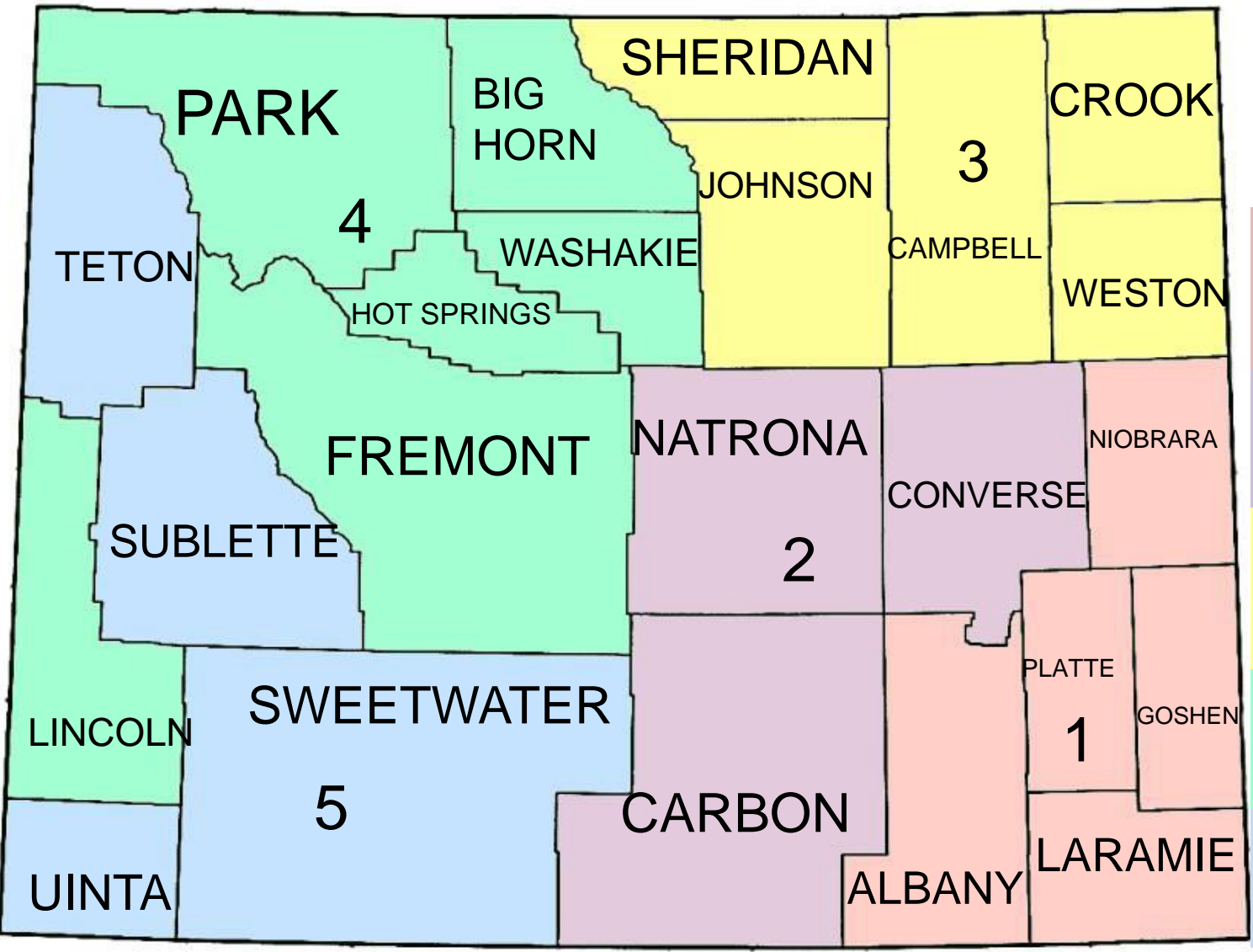
COMMENTS \_\_\_\_\_

*Please note that approval of the open burn request must be granted by the Division prior to conducting the open burn.*

*Prior to igniting the open burn: Notify the Air Quality Division  
Notify the Jurisdictional Fire Authority(ies)*

*While conducting the open burn: Attend and Observe Periodically*

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_



**District One**  
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Cheyenne, WY 82002  
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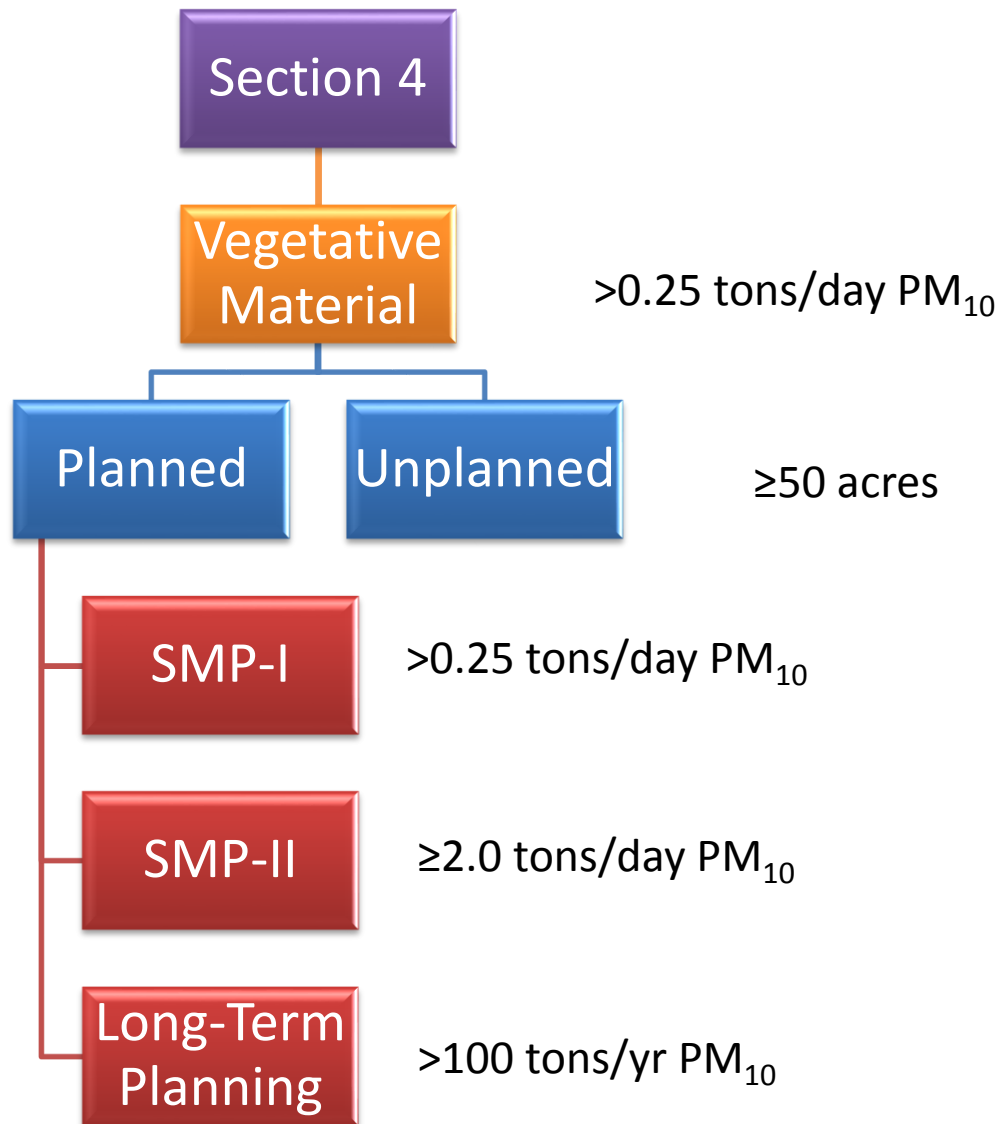
**District Two**  
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(307) 473-3455  
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**District Three**  
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# WAQSR Ch. 10, Sec. 4



# Type of Regulation

- Permit-By-Rule
  - Reduce administrative burden on burners and WDEQ-AQD
  - Promote equity, clarity and consistency
  - Provide predictability and enforceability
  - Specify circumstances under which a burn is allowed
  - Permit is assumed

# Regulatory Status and Applicability

- <http://soswy.state.wy.us/Rules/default.aspx>
  - Search by Agency (Dept. of Environmental Quality), Program (Air Quality), Rule Type (Current Rules and Regulations) and Chapter # (10)
- (a) Effective Date: For planned burns and unplanned fire events beginning on or after January 1, 2005.
- (c) Applicability:
  - (i) Planned burn with  $PM_{10}$  emissions  $>0.25$  tons/day
  - (ii) Unplanned fire events that exceed 50 acres

# Regulatory Status and Applicability

- (d) Materials allowed to be burned. **Only vegetative material shall be burned.**
- (f) SMP-I: Planned burn with PM<sub>10</sub> emissions between 0.25-2.0 tons/day.
- (g) SMP-II: Planned burn with PM<sub>10</sub> emissions at or above 2.0 tons/day.
- (h) Long-term planning:
  - Total planned burn projects are projected to generate PM<sub>10</sub> emissions greater than 100 tons/yr.
  - Managers must submit a written report to the AQD Administrator by January 31 every third year starting in 2005 (2008, 2011, **2014...**).

# Requirements Summary of Section 4

Requirement	Planned Burn Project		Unplanned Fire
	SMP-I	SMP-II	
Applicability	Burner	Burner	Jurisdictional Fire Authority*
	0.25-2.0 tons/day PM <sub>10</sub>	≥2.0 tons/day PM <sub>10</sub>	≥50 acres
DEQ Registration	Not required	Form by Jan. 31, but at least 2 weeks prior	Info available via alternate source
DEQ Notification	1 hour prior to ignition	By 10:00 a.m. on the business day prior to ignition	Info available via alternate source
DEQ Modification	Not applicable	Required	Required, Managed only
DEQ Reporting	Six (6) weeks after completion		By December 31
Smoke Management Education	Not required	Required	Required, managed only
Alternatives to Burning	Not required	Consider (rationale for NOT using)	Not Applicable

# Requirements Summary of Section 4

REQUIREMENT	PLANNED BURN PROJECT		UNPLANNED FIRE
	SMP-I	SMP-II	
<b>Emission Reduction Techniques</b>	Not required	At least one and as many as feasible	Not applicable
<b>Public Information</b>	Notify Jurisdictional fire authorities AND populations within 0.5 mile unless low density area	Notify Jurisdictional fire authorities AND populations within 10 miles	Notify Jurisdictional fire authorities AND populations within 10 miles
<b>Smoke Dispersion</b>	Burn during daytime hours. Slight breeze and wind direction when no population 0.5 mile downwind	Ventilation category: “good” or better OR “fair” and no population within 10 miles	Not applicable
<b>Monitoring</b>	Attend and observe periodically	Visual Monitoring Log or photos required. Case-by-case for populations and nonattainment areas within 10 miles downwind and Class I areas within 30 miles downwind	Visual Monitoring Log or photos required. Case-by-case for populations and nonattainment areas within 10 miles downwind and Class I areas within 30 miles downwind

\*Volunteer fire organizations' only requirements in DEQ reporting.

# Requirements Summary of Section 4

REQUIREMENT	PLANNED BURN PROJECT
	LONG-TERM PLANNING
<b>Applicability</b>	Burner and/or Land Manager Total Planned Burn Projects >100 tons/yr PM <sub>10</sub>
<b>Long-Term Planning Report</b>	By January 31 every third year starting in 2005 (2005, 2008, 2011, <b>2014</b> , ...)
<b>Long-Term Burn Estimates</b>	Estimates for the next 3 years for each planned burn project: location, burn area or pile volume, vegetation type, type of burn
<b>Alternatives to Burning</b>	Considered and utilized during the previous 3 years AND planned for the next 3 years: location and area of treatment(s), vegetation type(s), specific technique(s)

# Open Burn, SMP-I, SMP-II, or Long-Term Planning Equivalencies by Veg Type

Vegetation Type	0.25 Ton PM <sub>10</sub> Section 2/Section 4	2 Tons PM <sub>10</sub> SMP-I/SMP-II	100 Tons PM <sub>10</sub> Long Term Planning
Field Crops	16 acres	130 acres	6,500 acres
Shrub Land	8 acres	68 acres	3,400 acres
Forest	6 acres	46 acres	2,300 acres
Grass	25 acres	200 acres	10,000 acres
Weeds (ditches)	12 acres	100 acres	5,000 acres
Shrub / Forest piles	1,250 cubic feet	10,000 cubic feet	500,000 cubic feet

[http://deq.state.wy.us/aqd/SmokeMan/SMPDetermineStatus11\\_04.pdf](http://deq.state.wy.us/aqd/SmokeMan/SMPDetermineStatus11_04.pdf)

# SMP-I Requirement Checklist

## Between 0.25-2.0 tons/day PM<sub>10</sub>

- Prior to igniting:
  - Verify your SMP level
  - Notify the DEQ-AQD (1 hour before)
  - Obtain smoke dispersion waiver (if needed)
  - Notify the Jurisdictional Fire Authority(ies)
  - Notify population(s) within 0.5 mile of the burn, unless area of low population density (1 dwelling unit per 10 acres)
- While conducting:
  - Attend and observe periodically
  - Burn during daytime hours when there is a slight breeze and there is no population within 0.5 mile downwind
- After completion:
  - Within 6 weeks, submit a completed post burn reporting form
- Other:
  - If the total planned burn projects total exceeds 100 tons/yr PM<sub>10</sub>, submit a long-term planning form

# SMP-I Notification Form

STATE OF WYOMING  
DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION

**SMP-I Notification Form**

*Notification information may be submitted by phone, or fax or email.  
Use of this form is optional.*

**CONTACT INFORMATION:**

NAME \_\_\_\_\_ PHONE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ FAX \_\_\_\_\_  
CITY \_\_\_\_\_ E-MAIL \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
AGENCY/COMPANY (IF APPLICABLE) \_\_\_\_\_

**LOCATION:**

COUNTY \_\_\_\_\_ ELEVATION (FEET) \_\_\_\_\_  
LEGAL: SECTION \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ RANGE \_\_\_\_\_  
LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_ DATUM \_\_\_\_\_  
UTM: ZONE \_\_\_\_\_ EAST \_\_\_\_\_ NORTH \_\_\_\_\_ DATUM \_\_\_\_\_

**NEAREST POPULATION: (VOLUNTARY)**

**DAILY BURN INFORMATION: (VOLUNTARY)**

	DATE(S) (MONTH/DAY/YR)	VEGETATION TYPE(S)	AREA (ACRES) Max. Possible	PILE VOL. (CU-FT) Max. Possible
DAY 1				
DAY 2				
DAY 3				
DAY 4				
DAY 5				
DAY 6				
DAY 7				

**COMMENTS** \_\_\_\_\_

*This form shall be submitted to the WDEQ-AQD no later than one hour prior to ignition.*

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

*If SMP-I Notification Form is submitted electronically, the electronic signature will be attributed to the sender.*

# SMP-I Smoke Dispersion Waiver Form

STATE OF WYOMING  
DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION

SMP-I Smoke Dispersion Waiver Form

CONTACT INFORMATION

NAME \_\_\_\_\_ PHONE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ FAX \_\_\_\_\_  
CITY \_\_\_\_\_ E-MAIL \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
AGENCY/COMPANY (IF APPLICABLE) \_\_\_\_\_

BURN NAME \_\_\_\_\_ ID # \_\_\_\_\_ *To Be Assigned by WDEQ*  
LOCATION: COUNTY \_\_\_\_\_ ELEVATION (FEET) \_\_\_\_\_  
LEGAL: SECTION \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ RANGE \_\_\_\_\_  
LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_ DATUM \_\_\_\_\_  
UTM: ZONE \_\_\_\_\_ EAST \_\_\_\_\_ NORTH \_\_\_\_\_ DATUM \_\_\_\_\_

NEAREST POPULATION \_\_\_\_\_

DAILY BURN INFORMATION:

	DATE(S) (MONTH/DAY/YR)	VEGETATION TYPE(S)	AREA (ACRES) Max. Possible	PILE VOL. (CU-FT) Max. Possible
DAY 1				
DAY 2				
DAY 3				
DAY 4				
DAY 5				
DAY 6				
DAY 7				

WAIVER REQUEST:

TIME OF DAY ☐ STATE THE CIRCUMSTANCES THAT REQUIRE NIGHTTIME BURNING AND INDICATE THE PLANNED TIME OF IGNITION.  
WIND SPEED ☐ STATE THE CIRCUMSTANCES THAT REQUIRE BURNING WHEN THERE IS NOT AT LEAST A SLIGHT BREEZE.  
WIND DIRECTION AND DISTANCE TO POPULATION ☐ STATE THE CIRCUMSTANCES THAT REQUIRE BURNING WHEN A POPULATION IS WITHIN 0.5 MILE OF THE PLANNED BURN PROJECT IN THE DOWNWIND TRAJECTORY. STATE THE WIND DIRECTION AND DISTANCE TO POPULATION.

DEMONSTRATION THAT A WAIVER SHOULD BE GRANTED FROM WAQSR CH. 10, SEC. 4(f)(iii):

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COMMENTS \_\_\_\_\_

*Please note that approval of the SMP-I Smoke Dispersion Waiver must be granted by the WDEQ-AQD prior to igniting the planned burn project.*

*This form shall be submitted to the WDEQ-AQD by 10:00 am one business day prior to ignition.*

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
*If SMP-I Smoke Dispersion Waiver Form is submitted electronically, the electronic signature will be attributed to the sender.*

*To be Completed by WDEQ Only*

SMP-I SD WAIVER ☐ APPROVED ☐ NOT APPROVED  
CONDITIONS \_\_\_\_\_

APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

*To be Completed by WDEQ Only*

# SMP-I Post-Burn Report Form

## STATE OF WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION

### SMP-I Post Burn Reporting Form

#### CONTACT INFORMATION:

NAME \_\_\_\_\_ PHONE \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ FAX \_\_\_\_\_  
 CITY \_\_\_\_\_ E-MAIL \_\_\_\_\_  
 STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
 AGENCY/COMPANY (IF APPLICABLE) \_\_\_\_\_

BURN NAME \_\_\_\_\_ ID # \_\_\_\_\_ To Be Assigned by WDEQ  
 LOCATION: COUNTY \_\_\_\_\_ ELEVATION (FEET) \_\_\_\_\_

LEGAL: SECTION \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ RANGE \_\_\_\_\_  
 LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_ DATUM \_\_\_\_\_  
 UTM: ZONE \_\_\_\_\_ EAST \_\_\_\_\_ NORTH \_\_\_\_\_ DATUM \_\_\_\_\_

LAND OWNERSHIP: FEDERAL ☐ STATE ☐ MUNICIPAL ☐ PRIVATE ☐

#### NEAREST POPULATION

#### PUBLIC INFORMATION:

JURISDICTIONAL FIRE NAME \_\_\_\_\_ DATE/TIME \_\_\_\_\_  
 AUTHORITY(IES): NAME \_\_\_\_\_ DATE/TIME \_\_\_\_\_  
 PUBLIC \_\_\_\_\_ DATE \_\_\_\_\_

NOTIFICATION: ☐ AREA OF LOW POPULATION DENSITY WITHIN 0.5-MILE RADIUS

FOR FOREST, GRASSLAND, & SHRUB LAND ONLY: RESTORATION ☐ MAINTENANCE ☐

#### DAILY BURN INFORMATION:

DATE (MONTH/DAY/YR)	VEGETATION TYPE (SEE LIST)	PILE VOL. (CU-FT)	ACRES	LOADING (TONS/ACRE)	PERCENT CONSUMPTION

#### SMOKE DISPERSION:

#### WAIVER - DATE APPROVED

DATE (MONTH/DAY/YR)	TIME OF DAY	WIND SPEED	WIND DIRECTION	DISTANCE TO POPULATION	VENT. CAT. (OPTION)

#### AIR QUALITY MONITORING:

☐ ATTENDED AND OBSERVED PERIODICALLY, SPECIFY: \_\_\_\_\_ FREQUENCY \_\_\_\_\_  
 NUMBER OF TIMES \_\_\_\_\_  
☐ ATTENDED AND OBSERVED AT ALL TIMES  
 OPTION TO ATTEND AND OBSERVE: ☐ CONDUCTED VISUAL MONITORING, IDENTIFY:  
 DOCUMENTATION ATTACHED \_\_\_\_\_

#### SMOKE MANAGEMENT EDUCATION: (VOLUNTARY)

WDEQ-AQD SMOKE MANAGEMENT EDUCATION MATERIAL REVIEWED ON \_\_\_\_\_  
 TRAINING PROGRAM COMPLETED ON \_\_\_\_\_

#### EMISSION REDUCTION TECHNIQUES: (VOLUNTARY)

VEGETATION TYPE (SEE LIST)	EMISSION REDUCTION TECHNIQUE(S) (SEE LIST)	ACRES

#### COMMENTS

*This form shall be submitted no later than six weeks following planned burn project completion.*

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
*If SMP-I Post Burn Reporting Form is submitted electronically, the electronic signature will be attributed to the sender.*

#### VEGETATION TYPE LIST

Lodgepole Pine / Fir: little dead & down Forest: heavy dead & down with brush Thinning Unit: not piled with red needles Logging Slash: mod. accumulations Logging Slash: clearcut Logging Slash Piles: hand Logging Slash Piles: tractor, clean Logging Slash Piles: tractor, dirty Logging Slash Piles: landing	Ponderosa Pine: open canopy Ponderosa Pine: closed canopy Juniper Sagebrush Mountain Brush Short Grasses Tall Grasses Weeds	Barley Corn Hay Oats Seeds: Alfalfa Seeds: Grass Wheat CRP Ditches
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#### EMISSION REDUCTION TECHNIQUE LIST

<u>Reduce Area Burned</u> Burn Concentrations Isolate Fuels Mosaic Burning Alternate Year Burning	<u>Reduce Fuel Load</u> Mechanical Removal Mechanical Processing Firewood Sales Biomass: Electric Generation Biomass Utilization Ungulates  <u>Reduce Fuel Production</u> Chemical Treatments Site Conversion Land Use Change  <u>New Fuels</u> Burn before Litter Fall Burn before Green-Up	<u>Increase Combustion Efficiency</u> Burn Piles or Windrows Backing Fires Dry Conditions Rapid Mop-Up Residue Moisture Air Curtain Incinerators (WAQSR Ch 4, Sec 2 permit required) Aerial Ignition / Mass Ignition Into-the-Wind Striplighting Mobile Field Sanitizer Maintaining Fire Line Intensity  Other (specify)
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# SMP-II Requirement Checklist equal or greater than 2.0 tons/day PM<sub>10</sub>

- Prior to igniting:
  - Verify your SMP level
  - Review Smoke Management Educational Materials
  - Submit SMP-II Registration Form to DEQ-AQD (2 weeks prior)
  - Notify the DEQ-AQD (24 hours prior)
  - Obtain Emission Reduction Technique Waiver (if necessary, 24 hours prior on weekday)
  - Obtain Smoke Dispersion Waiver (if necessary, 24 hours prior on weekday)
  - Notify the Jurisdictional Fire Authority(ies)
  - Notify Population(s) within 10 miles of the burn
  - If required by DEQ-AQD, modify the planned burn project
- While conducting:
  - Do not exceed the maximum daily burn area or daily pile volume
  - Burn when ventilation category is “Good” or better OR “Fair” with no population within 10 miles downwind
  - Utilize at least one emission reduction technique
  - Conduct and document visual monitoring
  - If required by DEQ-AQD, conduct and document ambient air quality and/or visibility monitoring
  - If required by DEQ-AQD, modify the planned burn project
- After completion:
  - Within 6 weeks, submit a completed post burn reporting form (with photos or visual monitoring log)
- Other:
  - If the total planned burn projects total exceeds 100 tons/yr PM<sub>10</sub>, submit a long-term planning form

[http://deq.state.wy.us/aqd/SmokeMan/SMPChecklists11\\_04.pdf](http://deq.state.wy.us/aqd/SmokeMan/SMPChecklists11_04.pdf)

# SMP-II Registration Form

## STATE OF WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION

### SMP-II Registration Form

#### CONTACT INFORMATION:

NAME \_\_\_\_\_ PHONE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ FAX \_\_\_\_\_  
CITY \_\_\_\_\_ E-MAIL \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
AGENCY/COMPANY (IF APPLICABLE) \_\_\_\_\_

BURN NAME \_\_\_\_\_ ID # \_\_\_\_\_ To Be Assigned by WDEQ  
LOCATION: COUNTY \_\_\_\_\_ ELEVATION (FEET) \_\_\_\_\_  
LEGAL: SECTION \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ RANGE \_\_\_\_\_  
LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_ DATUM \_\_\_\_\_  
UTM: ZONE \_\_\_\_\_ EAST \_\_\_\_\_ NORTH \_\_\_\_\_ DATUM \_\_\_\_\_

LAND OWNERSHIP: FEDERAL ☐ STATE ☐ MUNICIPAL ☐ PRIVATE ☐

SENSITIVE RECEPTORS: POPULATION(S) \_\_\_\_\_ NONATTAINMENT \_\_\_\_\_ CLASS I AREA(S) \_\_\_\_\_  
W/1 10 MI. \_\_\_\_\_ AREA(S) W/1 10 MI. \_\_\_\_\_ W/1 30 MI. \_\_\_\_\_

JURISDICTIONAL FIRE AUTHORITY(IES) \_\_\_\_\_

FOR FOREST, GRASSLAND, & SHRUB LAND ONLY: RESTORATION ☐ MAINTENANCE ☐

TIME OF YEAR: DEC. – FEB. ☐ MAR. – MAY ☐ JUNE – AUG. ☐ SEPT. – NOV. ☐

TOTALS: ACREAGE \_\_\_\_\_ PILE VOLUME (CU-FT) \_\_\_\_\_ DURATION (DAYS) \_\_\_\_\_

#### BURN SIZE & FUEL LOADING BY VEGETATION TYPE:

VEGETATION	ACRES	TONS/ACRE OR CU-FT	VEGETATION	ACRES	TONS/ACRE OR CU-FT
Ponderosa Pine: open canopy			Ponderosa Pine: closed canopy		
Lodgepole Pine / Fir: little dead & down			Forest: heavy dead & down with brush		
Thinning Unit: not piled with red needles			Logging Slash: mod. accumulations		
Logging Slash: clearcut			Logging Slash Piles: hand		
Logging Slash Piles: tractor, clean			Logging Slash Piles: tractor, dirty		
Logging Slash Piles: landing			Juniper		
Sagebrush			Mountain Brush		
Short Grasses			Tall Grasses		
Barley			Corn		
Hay			Oats		
Seeds: Alfalfa			Seeds: Grass		
Wheat			CRP		
Weeds			Ditches		

#### ALTERNATIVES TO BURNING (SPECIFY REASON(S) FOR NON-USE):

TECHNICAL \_\_\_\_\_ ECONOMIC \_\_\_\_\_  
ENVIRONMENTAL \_\_\_\_\_ PUBLIC INTERESTS \_\_\_\_\_  
ADMIN. BARRIER \_\_\_\_\_ OTHER \_\_\_\_\_

#### EMISSION REDUCTION TECHNIQUES:

TECHNIQUE	ACRES	TECHNIQUE	ACRES
Reduce Area Burned		Reduce Fuel Consumption	
Burn Concentrations		High Moisture in Large Woody Fuels	
Isolate Fuels		Moist Litter and/or Duff	
Mosaic Burning		Burn before Precipitation	
Alternate Year Burning		Burn before Large Fuel Cures	
Mechanical Removal		Burn when Green	
Mechanical Processing		Burn Piles or Windrows	
Firewood Sales		Backing Fires	
Biomass: Electric Generation		Dry Conditions	
Biomass Utilization		Rapid Mop-Up	
Ungulates		Residue Moisture	
Incorporation into Soil		Air Curtain Incinerators (WAQSR Ch 6, Sec 2 permit required)	
Reduce Fuel Production		Aerial Ignition / Mass Ignition	
Chemical Treatments		Into-the-Wind Striplighting	
Site Conversion		Mobile Field Sanitizer	
Land Use Change		Maintaining Fire Line Intensity	
Burn before Litter Fall		Other (specify) _____	
New Fuels			
Burn before Green-Up			

VENTILATION EXCELLENT ☐ VERY GOOD ☐ GOOD ☐ FAIR\* ☐ POOR\* ☐  
CATEGORY: \* SPECIFY WIND DIRECTION \_\_\_\_\_ & DISTANCE TO POPULATION (MI) \_\_\_\_\_

#### AIR QUALITY MONITORING:

☐ WILL CONDUCT AND DOCUMENT VISUAL MONITORING (REQUIRED FOR ALL SMP-II PROJECTS).

☐ PLAN TO CONDUCT AMBIENT AIR QUALITY AND/OR VISIBILITY MONITORING, SPECIFY:

TYPE OF INSTRUMENT(S) \_\_\_\_\_

LOCATION OF INSTRUMENT(S) \_\_\_\_\_

#### SMOKE MANAGEMENT EDUCATION:

WDEQ-AQD SMOKE MANAGEMENT EDUCATION MATERIAL REVIEWED ON \_\_\_\_\_

TRAINING PROGRAM COMPLETED ON \_\_\_\_\_

#### COMMENTS

This form shall be submitted by January 31 or no later than two weeks prior to ignition.

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

If SMP-II Registration Form is submitted electronically, the electronic signature will be attributed to the sender.

# SMP-II Notification Form

STATE OF WYOMING  
DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION

**SMP-II Notification Form**

*Notification information may be submitted by phone, or fax or email.  
Use of this form is optional.*

BURN NAME \_\_\_\_\_ ID # \_\_\_\_\_

**DAILY BURN INFORMATION:**

	DATE(S) (MONTH/DAY/YR)	AREA (ACRES)		PILE VOLUME (CU-FT)	
		Max. Possible	Most Likely	Max. Possible	Most Likely
DAY 1					
DAY 2					
DAY 3					
DAY 4					
DAY 5					
DAY 6					
DAY 7					

VENTILATION EXCELLENT ☐ VERY GOOD ☐ GOOD ☐ FAIR\* ☐ POOR\* ☐  
CATEGORY: \* SPECIFY WIND DIRECTION \_\_\_\_\_ & DISTANCE TO POPULATION (MI) \_\_\_\_\_

COMMENTS \_\_\_\_\_

*This form shall be submitted to the WDEQ-AQD by 10:00 am one business day prior to ignition.*

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

*If SMP-II Notification Form is submitted electronically, the electronic signature will be attributed to the sender.*

# SMP-II Emission Reduction Techniques Waiver Form

**STATE OF WYOMING**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION**

## SMP-II Emission Reduction Technique Waiver Form

BURN NAME	ID #
-----------	------

**NEAREST POPULATION****DAILY BURN INFORMATION:**

	DATE(S) (MONTH/DAY/YR)	AREA (ACRES)		PILE VOL. (CU-FT)	
		Max. Possible	Most Likely	Max. Possible	Most Likely
DAY 1					
DAY 2					
DAY 3					
DAY 4					
DAY 5					
DAY 6					
DAY 7					

**WAIVER REQUEST:**

STATE THE CIRCUMSTANCES THAT REQUIRE BURNING WITHOUT IMPLEMENTING A MINIMUM OF ONE EMISSION REDUCTION TECHNIQUE. STATE ALL APPLICABLE FEASIBILITY CONSIDERATIONS.

**DEMONSTRATION THAT A WAIVER SHOULD BE GRANTED FROM WAQSR CH. 10, SEC. 4(g)(i)(C):**

[illegible]

### COMMENTS

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*Please note that approval of the SMP-II Emission Reduction Technique Waiver must be granted by the WDEQ-AQD prior to igniting the planned burn project.*

*This form shall be submitted by January 31 or no later than two weeks prior to ignition.*

**SIGNATURE**

DATE \_\_\_\_\_

*If SMP-II Emission Reduction Technique Waiver Form is submitted electronically, the electronic signature will be attributed to the sender.*

[illegible]

# Smoke Dispersion Waiver Submittal

- Submit waivers to DEQ-AQD during regular business hours (Monday-Friday, 8:00 a.m. to 5:00 p.m.) unless otherwise indicated.
- Smoke Ventilation Categories

Ventilation Category	Knot-Feet
Excellent	>150,000
Very Good	100,000-149,999
Good	60,000-99,999
Fair	40,000-59,999
Poor	<40,000

# SMP-II Smoke Dispersion Waiver Form

STATE OF WYOMING  
DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION

SMP-II Smoke Dispersion Waiver Form

BURN NAME \_\_\_\_\_ ID # \_\_\_\_\_

NEAREST POPULATION \_\_\_\_\_

DAILY BURN INFORMATION:

	DATE(S) (MONTH/DAY/YR)	AREA (ACRES)		PILE VOL. (CU-FT)	
		Max. Possible	Most Likely	Max. Possible	Most Likely
DAY 1					
DAY 2					
DAY 3					
DAY 4					
DAY 5					
DAY 6					
DAY 7					

WAIVER REQUEST:

VENTILATION CATEGORY "FAIR" AND DISTANCE TO POPULATION \_\_\_\_\_ STATE THE CIRCUMSTANCES THAT REQUIRE BURNING WHEN THE VENTILATION CATEGORY IS "FAIR" AND A POPULATION IS WITHIN 10 MILES OF THE PLANNED BURN PROJECT IN THE DOWNWIND TRAJECTORY. STATE THE WIND DIRECTION AND DISTANCE TO POPULATION.

VENTILATION CATEGORY "POOR" \_\_\_\_\_ STATE THE CIRCUMSTANCES THAT REQUIRE BURNING WHEN THE VENTILATION CATEGORY IS "POOR". STATE THE WIND DIRECTION AND DISTANCE TO POPULATION.

DEMONSTRATION THAT A WAIVER SHOULD BE GRANTED FROM WAQSR CH. 10, SEC. 4(g)(i)(D)(II):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- ☐ MAP IDENTIFYING DIURNAL DRAINAGES  
☐ MAP SHOWING THE PLANNED BURN PROJECT AREA AND POPULATION(S) WITH WIND DIRECTION  
☐ SMOKE MITIGATION PLAN

COMMENTS \_\_\_\_\_

Please note that approval of the SMP-II Smoke Dispersion Waiver must be granted by the WDEQ-AQD prior to igniting the planned burn project.

This form shall be submitted to the WDEQ-AQD by 10:00 am one business day prior to ignition.

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

If SMP-II Smoke Dispersion Waiver Form is submitted electronically, the electronic signature will be attributed to the sender.

To be Completed by WDEQ Only

SMP-II SD WAIVER

☐ APPROVED

☐ NOT APPROVED

CONDITIONS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

To be Completed by WDEQ Only

# SMP-II Post-Burn Report Form

**STATE OF WYOMING**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION**

## SMP-II Post Burn Reporting Form

**BURN NAME** \_\_\_\_\_ **ID #** \_\_\_\_\_

**PUBLIC INFORMATION:**

JURISDICTIONAL FIRE		NAME	DATE/TIME
AUTHORITY(IES):		NAME	DATE/TIME
PUBLIC		METHOD	DATE
NOTIFICATION:		METHOD	DATE

**DAILY BURN INFORMATION:**[illegible]

### EMISSION REDUCTION TECHNIQUES:

WAIVER - DATE APPROVED

VEGETATION TYPE (SEE LIST)	EMISSION REDUCTION TECHNIQUE(S) (SEE LIST)	ACRES

**SMOKE DISPERSION:**

**WAIVER - DATE APPROVED**[illegible]

### AIR QUALITY MONITORING:

- ☐ CONDUCTED VISUAL MONITORING, IDENTIFY:  
DOCUMENTATION ATTACHED
- 
- ☐ CONDUCTED AMBIENT AIR QUALITY MONITORING, IDENTIFY:  
DOCUMENTATION ATTACHED
- 
- ☐ CONDUCTED VISIBILITY MONITORING, IDENTIFY:  
DOCUMENTATION ATTACHED

## COMMENTS

*This form shall be submitted no later than six weeks following planned burn project completion.*

**SIGNATURE** **DATE**

**SIGNATURE** \_\_\_\_\_ **DATE** \_\_\_\_\_

*If SMP-II Post Burn Reporting Form is submitted electronically, the electronic signature will be attributed to the sender.*

### VEGETATION TYPE LIST

Lodgepole Pine / Fir: little dead & down	Ponderosa Pine: open canopy	Barley
Forest: heavy dead & down with brush	Ponderosa Pine: closed canopy	Corn
Thinning Unit: not piled with red needles	Juniper	Hay
Logging Slash: mod. accumulations	Sagebrush	Oats
Logging Slash: clearcut	Mountain Brush	Seeds: Alfalfa
Logging Slash Piles: hand	Short Grasses	Seeds: Grass
Logging Slash Piles: tractor, clean	Tall Grasses	Wheat
Logging Slash Piles: tractor, dirty	Weeds	CRP
Logging Slash Piles: landing		Ditchers

### EMISSION REDUCTION TECHNIQUE LIST

FIRE SUPPRESSION MANAGEMENT PLAN		
<u><b>Reduce Area Burned</b></u> Burn Concentrations Isolate Fuels Mosaic Burning Alternate Year Burning	<u><b>Reduce Fuel Load</b></u> Mechanical Removal Mechanical Processing Firewood Sales Biomass: Electric Generation Biomass Utilization Ungulates	<u><b>Increase Combustion Efficiency</b></u> Burn Piles or Windrows Backing Fires Dry Conditions Rapid Mop-Up Residue Moisture Air Curtain Incinerators (WAQSR Ch 6, Sec 2 permit required) Aerial Ignition / Mass Ignition Into-the-Wind Striplighting Mobile Field Sanitizer Maintaining Fire Line Intensity
<u><b>Reduce Fuel Production</b></u> Chemical Treatments Site Conversion Land Use Change	Incorporation into Soil	
<u><b>New Fuels</b></u> Burn before Litter Fall Burn before Green-Up	<u><b>Reduce Fuel Consumption</b></u> High Moisture in Large Woody Fuels Moist Litter and/or Duff Burn before Precipitation Burn before Large Fuel Cures Burn when Green	Other (specify)

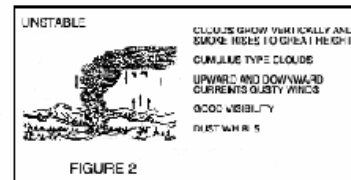
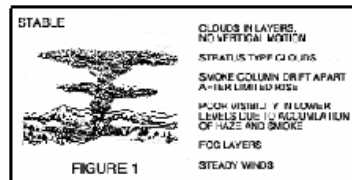
# Visual Monitoring Log

**STATE OF WYOMING**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION**

### Visual Monitoring Log

BURN NAME \_\_\_\_\_ ID # \_\_\_\_\_  
OBSERVER \_\_\_\_\_  
NAME(S) \_\_\_\_\_

**SUCCESSIVE OBSERVATIONS:**

[illegible]

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Photo/Video Log

**STATE OF WYOMING**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION**

### Photo / Video Log

BURN NAME \_\_\_\_\_ ID # \_\_\_\_\_  
 PHOTOGRAPHER \_\_\_\_\_  
 NAME(S) \_\_\_\_\_

**PHOTO / VIDEO OBSERVATIONS:**[illegible]

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Unplanned Fire Event Requirement Checklist greater than 50 acres

- Prior to managing:
  - Review Smoke Management Educational Materials
- When event (suppressed or managed) exceeds 50 acres:
  - Notify the Jurisdictional Fire Authority(ies)
  - Notify population(s) within 10 miles of the burn
  - Conduct and document visual monitoring
  - If required by DEQ-AQD, conduct ambient air quality and/or visibility monitoring
  - If required by DEQ-AQD, modify the unplanned fire event under management
- After event (suppressed or managed) cessation:
  - By December 31, submit a completed post burn reporting form
- NOTE: Volunteer fire organizations' only requirement is the submittal of the post burn reporting form

# Unplanned Fire Post Burn Reporting Form

**STATE OF WYOMING**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR QUALITY DIVISION**

## Unplanned Fire Post Burn Reporting Form

*For events that exceed 50 acres.*

**CONTACT INFORMATION:**  
NAME \_\_\_\_\_ PHONE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ FAX \_\_\_\_\_  
CITY \_\_\_\_\_ E-MAIL \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
AGENCY/COMPANY (IF APPLICABLE) \_\_\_\_\_  
**VOLUNTEER FIRE ORGANIZATION:** ☐

BURN NAME \_\_\_\_\_ ID # \_\_\_\_\_ To Be Assigned by WDEQ \_\_\_\_\_  
 LOCATION: COUNTY \_\_\_\_\_ ELEVATION (FEET) \_\_\_\_\_  
 LEGAL: SECTION \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ RANGE \_\_\_\_\_  
 LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_ DATUM \_\_\_\_\_  
 UTM: ZONE \_\_\_\_\_ EAST \_\_\_\_\_ NORTH \_\_\_\_\_ DATUM \_\_\_\_\_  
 LAND OWNERSHIP: FEDERAL ☐ STATE ☐ MUNICIPAL ☐ PRIVATE ☐  
 SENSITIVE RECEPTORS: POPULATION(S) \_\_\_\_\_ NONATTAINMENT AREA(S) W/ 10 MI \_\_\_\_\_ CLASS I AREA(S) W/ 30 MI \_\_\_\_\_

<b>PUBLIC INFORMATION:</b>		
<b>JURISDICTIONAL FIRE</b>	<b>NAME</b>	<b>DATE/TIME</b>
<b>AUTHORITY(IES):</b>	<b>NAME</b>	<b>DATE/TIME</b>
<b>PUBLIC</b>	<b>METHOD</b>	<b>DATE</b>
<b>NOTIFICATION:</b>	<b>METHOD</b>	<b>DATE</b>

MANAGEMENT RESPONSE: SUPPRESSION ☐ MANAGE TO ACHIEVE MGT. OBJECTIVE\* ☐  
\* SPECIFY: RESTORATION ☐ MAINTENANCE ☐

[illegible]

### AIR QUALITY MONITORING:

☐ CONDUCTED VISUAL MONITORING, IDENTIFY:  
DOCUMENTATION ATTACHED \_\_\_\_\_

☐ CONDUCTED AMBIENT AIR QUALITY MONITORING, IDENTIFY:  
DOCUMENTATION ATTACHED \_\_\_\_\_

☐ CONDUCTED VISIBILITY MONITORING, IDENTIFY:  
DOCUMENTATION ATTACHED \_\_\_\_\_

**SMOKE MANAGEMENT EDUCATION: (FOR UNPLANNED FIRE UNDER MANAGEMENT ONLY)**

WDEQ-AQD SMOKE MANAGEMENT EDUCATION MATERIAL REVIEWED ON \_\_\_\_\_  
 \_\_\_\_\_ TRAINING PROGRAM COMPLETED ON \_\_\_\_\_

COMMENTS \_\_\_\_\_

*This form shall be submitted to the WDEQ-AOD no later than December 31.*

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**SIGNATURE** \_\_\_\_\_ **DATE** \_\_\_\_\_

*If Unplanned Fire Post Burn Reporting Form is submitted electronically, the electronic signature will be attributed to the sender.*

### VEGETATION TYPE LIST

VEGETATION	VEGETATION	VEGETATION
Lodgepole Pine / Fir: little dead & down	Ponderosa Pine: open canopy	Barley
Forest: heavy dead & down with brush	Ponderosa Pine: closed canopy	Corn
Thinning Unit: not piled with red needles	Juniper	Hay
Logging Slash: mod. accumulations	Sagebrush	Oats
Logging Slash: clearcut	Mountain Brush	Seeds: Alfalfa
Logging Slash Piles: hand	Short Grasses	Seeds: Grass
Logging Slash Piles: tractor, clean	Tall Grasses	Wheat
Logging Slash Piles: tractor, dirty	Weeds	CRP
Logging Slash Piles: landuse		Ditches

# SMP Implementation for Calendar Year 2014

# SMP Registrations

	2014		2013		2012	
Registrations	203		167		172	
	SMP I	SMP II	SMP I	SMP II	SMP I	SMP II
	60	143	35	132	30	142
	29.5%	70.5%	21%	79%	17.4%	82.6%
Total Proposed Area	178,052 acres		57,574.3 acres		74,807.95 Acres	
Proposed Pile Volume	14,909,775 ft. <sup>3</sup>		10,823,843 ft. <sup>3</sup>		5,107,659 ft. <sup>3</sup>	
# of Unplanned Events	18 total with 7 > 50 acres		28		87	
Area of Unplanned Events	3,861 acres		53,374 acres		485,524.96 Acres	

# Notifications

	2014		2013		2012	
Notifications	135		88		77	
Area	17,243.3 Acres		20,792.25 Acres		22,374.95 Acres	
Pile Volume	10,284,824 ft. <sup>3</sup>		10,873,929 ft. <sup>3</sup>		2,624,240 ft. <sup>3</sup>	
	SMP I	SMP II	SMP I	SMP II	SMP I	SMP II
	60	75	35	53		
	44.5%	55.5%	39.7%	60.3%		
Area (acres)	1,191	16,052.3	435.25	20,357		
Pile Volume (cf <sup>3</sup> )	1,443,604	8,841,220	218,311	10,655,618		

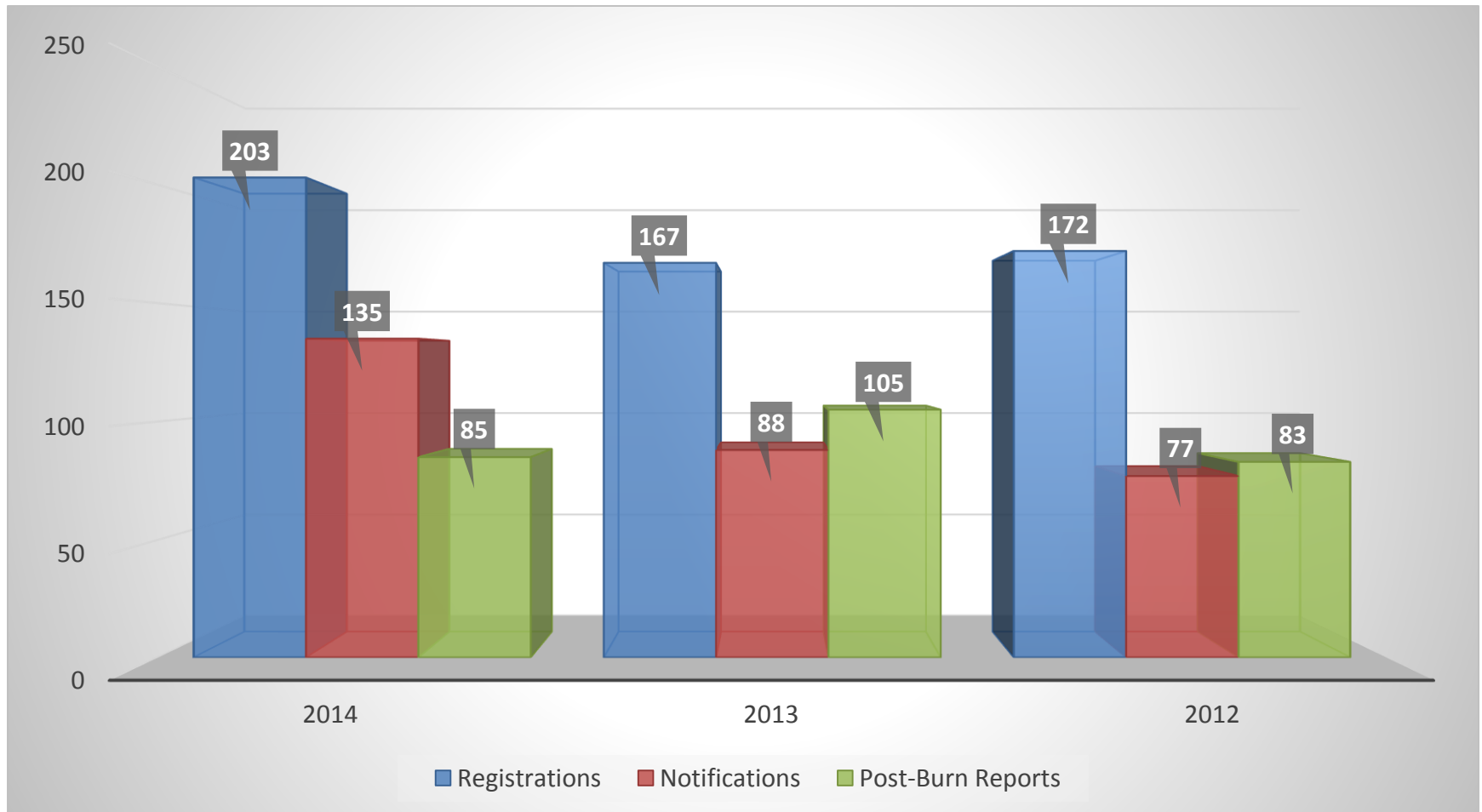
# Post Burn Reports

as of 2/3/15

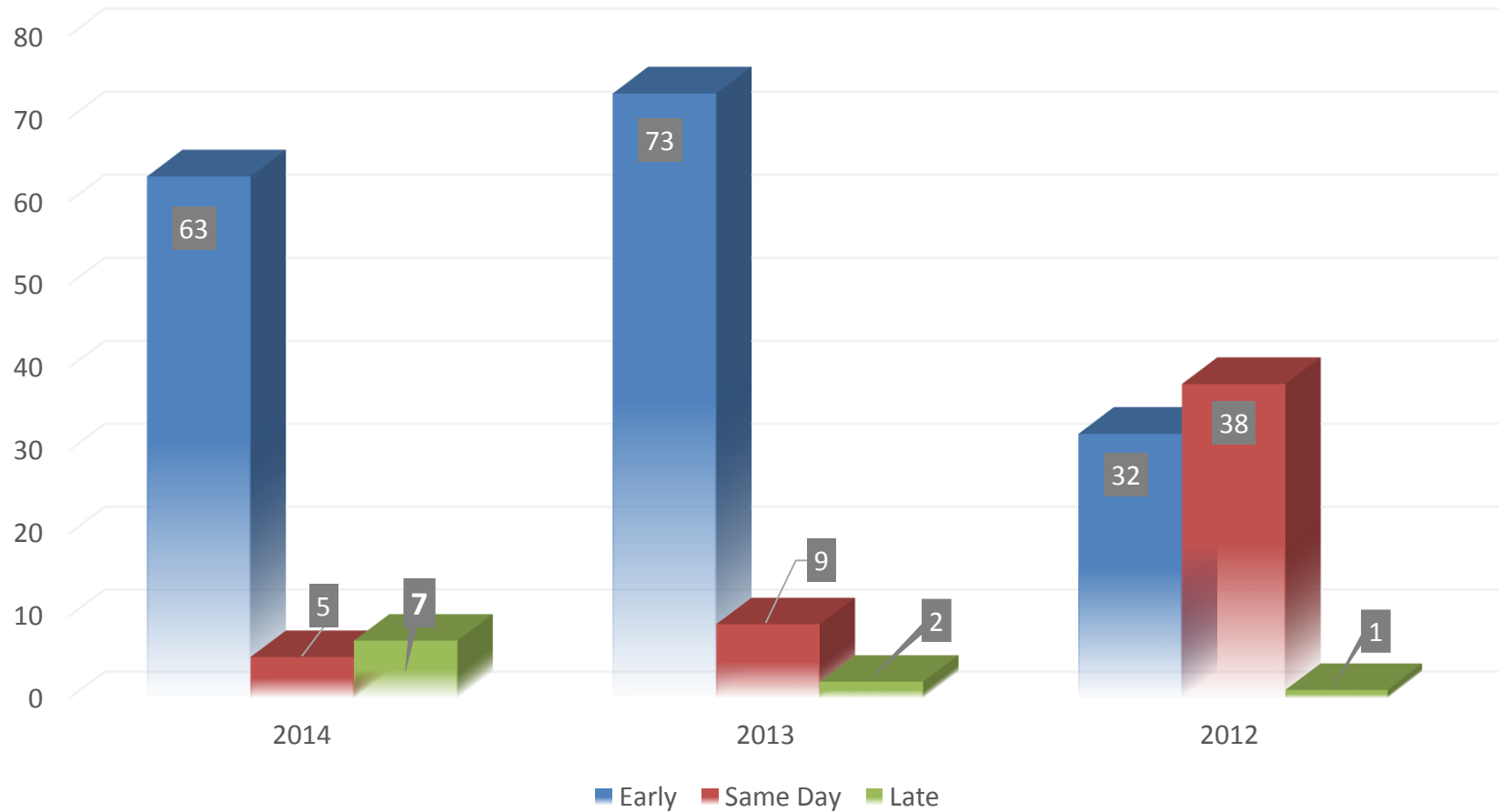
	2014		2013		2012	
Post Burn Reports	85		105		83	
Area	5,840.9 Acres		6,976.1 Acres		20,553.46 Acres	
Pile Volume	8,734,192 ft. <sup>3</sup>		7,859,183.202 ft. <sup>3</sup>		2,989,251.92 ft. <sup>3</sup>	
	SMP I	SMP II	SMP I	SMP II	SMP I	SMP II
	34	51	26	79		
	40%	60%	24.7%	75.3%		
On-Time Reports	64 (75.3%)		57 (54.8%)		68 (81.9%)	
Late Reports	21 (24.7%)		47 (45.2%)		15 (18.1%)	

# Registrations, Notifications and Post Burn Reports

(as of 2/3/15)



# Burn Notification Submittal Time



# Comments

- SMP Notifications should be received by DEQ by 10am the business day prior to ignition.
- Several late reports
- Some Post Burn reports and unplanned event reports still needed.
- For SMP-II Registrations, please include: fuel loading and smoke management education. For pile burns, please include pile size, number of piles and pile locations.
- Make sure the dispatcher calling in knows the Burn ID Number
- Long Term Planning Reports needed for districts and offices that meet the threshold

# How We Use the Data

- Data from Post-Burn Reports are compiled and then analyzed by the **Western Regional Air Partnership-Fire Emissions Tracking System**
- **WRAP-FETS** calculates emissions from the fire data for us.

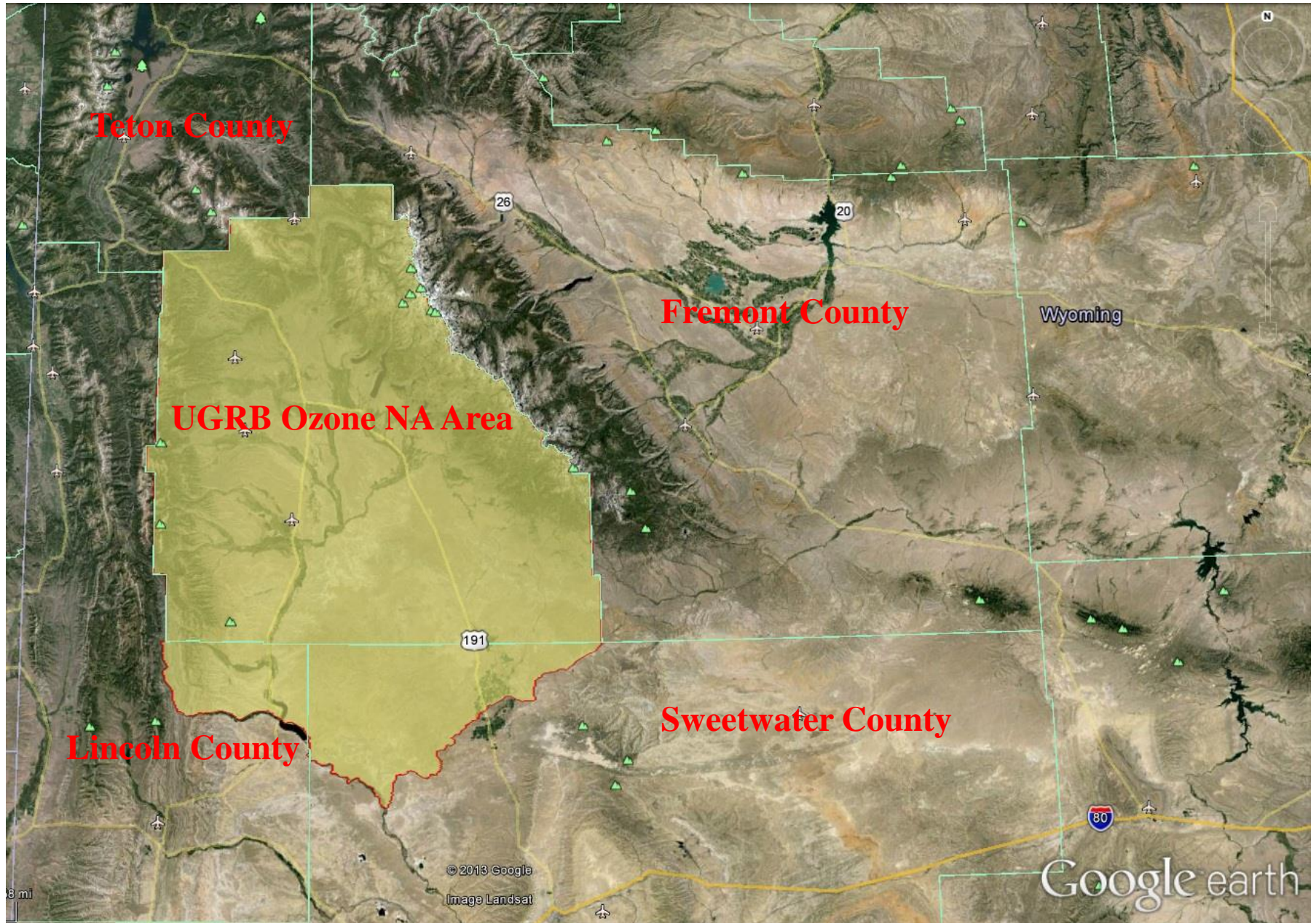
# 2013 Total Fire Emissions

Total Emissions (Tons)	
CH <sub>4</sub> (Methane)	30,616.56
OC (Organic Carbon)	34,714.5
EC (Elemental Carbon)	4,128.439
PM <sub>2.5</sub> (Particulate Matter less than 2.5 µm in diameter)	95,702.83
PM <sub>10</sub> (Particulate Matter less than 10 µm in diameter)	174,340.4
NMHC (Non-Methane Hydrocarbons)	205,079
NO <sub>x</sub> (Nitrogen Oxides)	17,054
SO <sub>2</sub> (Sulfur Dioxide)	3,239.713
CO <sub>2</sub> (Carbon Dioxide)	687,929.5
NH <sub>3</sub> (Ammonia)	7,452.379
CO (Carbon Monoxide)	11,912,360

# 2012 Total Fire Emissions

Total Emissions (Tons)	
CH <sub>4</sub> (Methane)	67,439.5
OC (Organic Carbon)	69,183.26
EC (Elemental Carbon)	8,308.5
PM <sub>2.5</sub> (Particulate Matter less than 2.5 µm in diameter)	258,997.0
PM <sub>10</sub> (Particulate Matter less than 10 µm in diameter)	199,399.1
NMHC (Non-Methane Hydrocarbons)	520,784.4
NO <sub>x</sub> (Nitrogen Oxides)	29,619.91
SO <sub>2</sub> (Sulfur Dioxide)	6,537.77
CO <sub>2</sub> (Carbon Dioxide)	23,512,946
NH <sub>3</sub> (Ammonia)	13,977.8
CO (Carbon Monoxide)	1,495,175

# UGRB Ozone Information



# Ozone Non-Attainment Area & SMP

- Upper Green River Basin (UGRB) Ozone
  - Winter Season is from January 1-March 31 every year.
  - Oil and gas operators implement contingency plans when elevated ozone may occur.
  - On days of elevated ozone, the AQD may not allow burns to occur.
  - All SMP-II burn registrations with locations within 10 miles of the Non-Attainment Area need to mark the checkbox on the form.
  - How will the new Ozone Standard affect burning in Wyoming?

# Discussion Topics

- What is a population?
- What notification efforts need to be made to a population?
- What is the average size of a burn pile and what is its location?
- Can community piles be moved or located further away from a given population?
- Can large, SMP-II machine piles be separated into 2 or more smaller, SMP-I piles?

# Important Websites and Links

- [Open Burn and Smoke Management Program](#)
- [Wyoming State Forestry Division Fire Information](#)
- [USFS Active Fire Mapping Program](#)
- [WRAP-FETS](#)
- [NIFC Incident Management Report](#)
- [NASA Worldview](#)
- [Fire Weather](#)
- [BlueSky Playground](#)
- [InciWeb](#)
- [Wyoming SMP Guidance Document](#)
- [Wyoming AQD Ambient Monitors](#)

# Future Goals

- Improve how DEQ-AQD obtains fire emissions via models
- Development and timeframe for ASIS website as a means for the burner to submit their own registrations, notifications, and reports.

# Annual 2016 Meeting

- When: Tuesday, February 16, 2016
- Time: 10:00 a.m. to 12:00 p.m.
- Where: Wind River Conference Room,  
Cheyenne, Wyoming
- Method: TBD

# Questions or Comments

CONTACT:

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(307)777-6993

<http://deq.wyoming.gov/aqd/smoke-management/>